REMARKS

Claims 1 to 13 were pending in the present application. Applicant has amended claims 1, 8, 9, 12, and 13. Claims 1 to 13 remain pending in the present application.

Claim Rejections

Claim 1

The Examiner rejected independent claim 1 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,744,811 ("Kantschuk") in view of admitted prior art ("APA") and an article entitled "Ciena Adds Rate-Adaptive Gigabit Ethernet to Its Service-Enabling Lightworks Toolkit" ("Ciena"). Specifically, the Examiner found that Kantschuk discloses all the elements of claim 1 but is related to a DSL system instead of an optical communication network.

> But, what Kantschuk discloses is a DSL system, not the optical communication network; Kantschuk does not disclose an optical fibre and optical transceivers.

> However, [as] admitted by applicant, "currently there is a vast network of installed optical fiber links of various lengths and bandwidth all of which are capable of handling a variety of transmission rates from a few Gb/s to as high as many 10 Gb/s". Although Kantschuk's system deals DSL system, it is obvious that the same pattern or method can be used in the optical communication since the problem need to be solved in optical communication is similar to that of DSL. And Ciena discloses [an] optical rate-adaptive gigabit Ethernet to offer customer any-size Gigabit Ethernet service.

> Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the rate adaptive system taught by Kantschuk to the optical communication so that a best use of the optical resources can be obtained."

Kantschuk, pp. 2 and 3.

Kantschuk discloses a method in which each modem in a modem pool changes its bit rate according to a signal-to-noise ratio (SNR) margin until the overall bit rate of the modem pool is not improving. Kantschuk, col. 4, line 53 to col. 5, line 45. Each modem may also dynamically adjust its bit rate according to the SNR margin. Id. at col. 5, lines 46 to 60. When two modem pools in communication with each other can accommodate <u>different bits rates in the upstream and the downstream directions</u>, the above methods are independently carried out in the two modem pools. Id. at col. 6, lines 23 to 26. When two modem pools cannot accommodate different bit rates in the upstream and downstream directions, each pair of modems use <u>conventional</u>

negotiation techniques to decide on a common bit rate for communication between them. Id. at col. 6, lines 15 to 23.

Applicant has amended claim 1, which now recites:

> 1. A rate adaptive system for optical communication networks comprising:
>
>> a plurality of optical transceivers capable of transmitting and receiving optical signals at a plurality of rates to each other, and
>>
>> an optical fibre linked to said optical transceivers,
>>
>> wherein said system is configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition by causing said optical transceivers to transmit and receive at a different rate.

Amended claim 1 (emphasis added).

Amended claim 1 recites optical transceivers that transmit and receive signals at an initial rate and then transmit and receive signals at a different rate when an error condition is detected. These steps allow the optical transceivers to determine a common transmitting and receiving rate between them. On the other hand, Kantschuk discloses that, when a modem pool has to use the same bit rate to send and receive data, conventional negotiation techniques are used between corresponding modems in the two modem pools to set a common bit rate. Kantschuk, col. 6, lines 15 to 23. Thus, Kantschuk does not disclose the steps recited in amended claim 1 to set a common rate to transmit and receive optical signals between the optical transceivers. Accordingly, Kantschuk does not disclose the elements of claim 1.

Applicant notes that Ciena does not provide any motivation to combine the cited references. Ciena discloses the concept of Rate-Adaptive Gigabit Ethernet, which "is similar to fractional T-carrier services, where an end-user might require more than 100Mbps of service, but less than 1Gbps." Ciena, p. 1. In other words, the end-user may pay for a fraction of the entire bandwidth if that is what the end-user desires to use. Here, "rate-adaptive" refers to fractional fees paid for fractions of the bandwidth. Thus, Ciena does not disclose anything related to how optical transceivers may adapt different transmission and reception rates.

For the above reasons, amended claim 1 is patentable over Kantschuk, the APA, and Ciena.

Claims 2 to 8

Claims 2 to 8 depend from amended claim 1 and are patentable for at least the same reasons as amended claim 1.

Claims 9 to 11

Amended claim 9 recites similar limitations as amended claim 1. Thus, amended claim 9 is patentable for at least the same reasons as amended claim 1.

Claims 10 and 11 depend from amended claim 9 and are patentable for at least the same reasons as amended claim 9.

Claims 12 and 13

Amended claims 12 and 13 recite similar limitations as amended claim 1. Thus, amended claims 12 and 13 are patentable for at least the same reasons as amended claim 1.

Summary

In summary, claims 1 to 13 were pending in the present application. Applicant has amended claims 1, 8, 9, 12, and 13. For the above reasons, Applicant respectfully requests allowance of claims 1 to 13. Should the Examiner have any questions, please call the undersigned at (408) 382-0480x206.

I hereby certify that this correspondence is being transmitted prior to expiration of the set period of time by being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).	Respectfully submitted,
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